

ReedSmith

Carl H. Pierce
Direct Phone: 215.241.7970
Email: cpierce@reedsmith.com



2500 One Liberty Place
1650 Market Street
Philadelphia, PA 19103-7301
215.851.8100
Fax 215.851.1420

April 25, 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Gillston et al.

Serial No.: 10/726,262

Filed: December 2, 2003

Attorney Docket No.: 01-40147-US-C1

For: Catalytic Combustion Surfaces And Method For Creating Catalytic Combustion Surfaces

TRANSMITTAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

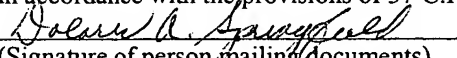
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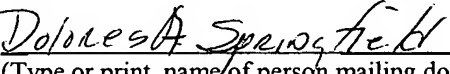
Enclosed for filing is a response to the Office Action which has a mailing date of March 23, 2005 in the above-entitled invention. The following documents are submitted herewith:

- 1) Response and Request For Reconsideration; and
- 2) A self-addressed stamped return receipt postcard

Certificate of Express Mail (37 CFR 1.10)

I hereby certify that the attached Patent Application, and any document referred to as being attached or included, is being deposited with the "Express Mail Post Office to Addressee" service of the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **April 25, 2005**. The number of the "Express Mail" mailing label (**EV482561748US**) has been placed on the accompanying correspondence prior to mailing. It is therefore respectfully requested that the attached be considered as having been filed in the Office on the date shown above in accordance with the provisions of 37 C.F.R. 1.10.


(Signature of person mailing documents)


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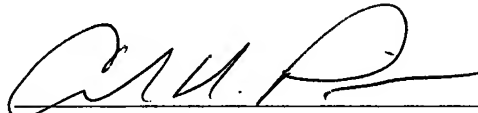
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April 25, 2005
Page 2

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The Commissioner is hereby authorized to charge any additional fees required or credit any overpayment in connection with this filing to Deposit Account No. 18-0586

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'C.H. Pierce', is written over a horizontal line.

Carl H. Pierce
Registration No. 45,730
REED SMITH LLP
2500 One Liberty Place
1650 Market Street
Philadelphia, PA 19103-7301
Tel.: 215-851-8100
Fax: 215-851-1420



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Gillston *et al.*

Serial No. 10/726,262

Filed: December 2, 2003

Attorney Docket No.: 01-40147-US-C1

Art Unit: 3747

CATALYTIC COMBUSTION SURFACES
AND METHOD FOR CREATING
CATALYTIC COMBUSTION SURFACES

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE AND REQUEST FOR RECONSIDERATION

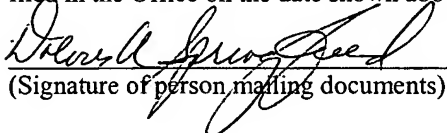
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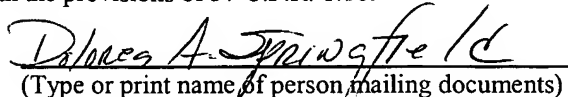
In response to the Office Action mailed on March 23, 2005, please consider the following remarks. Applicant respectfully submits that the application is in condition for allowance, and requests same.

Comments to the claims are reflected in the listing of claims which begin on page 2 of this paper. Remarks begin on page 4 of this paper.

Certificate of Express Mail (37 CFR 1.10)

I hereby certify that the attached Patent Application, and any document referred to as being attached or included, is being deposited with the "Express Mail Post Office to Addressee" service of the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **April 25, 2005**. The number of the "Express Mail" mailing label **EV 482 561 748 US** has been placed on the accompanying correspondence prior to mailing. It is therefore respectfully requested that the attached be considered as having been filed in the Office on the date shown above in accordance with the provisions of 37 C.F.R. 1.10.


(Signature of person mailing documents)


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LISTING OF CLAIMS

Claim 1. (original) An internal combustion engine having at least one reciprocating component, a bore within which the at least one reciprocating component reciprocates, and a closure over one end of the bore associated with the at least one reciprocating component, said reciprocating component having at least one combustion face, said combustion face defining a combustion face area, said reciprocating component further reciprocating relative to the closure and having a position at which the combustion face is at a closest point to the closure, wherein a combustion volume within which an air/fuel mixture is combusted is defined at least in part by the combustion face of the reciprocating component, and a surface of the closure, wherein at least a portion of the surfaces which define the combustion volume are coated with a substantially homogenous metallic coating comprising between greater than 15% and about 80% nickel such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face, and further wherein said coating is exposed to combustion gases.

Claim 2. (original) An internal combustion engine having at least one reciprocating component, a bore within which the at least one reciprocating component reciprocates, and a closure over one end of the bore associated with the at least one reciprocating component, said reciprocating component having at least one combustion face, said combustion face defining a combustion face area, said reciprocating component further reciprocating relative to the closure and having a position at which the combustion face is at a closest point to the closure, wherein a combustion volume within which an air/fuel mixture is combusted is defined at least in part by

the combustion face of the reciprocating component, and a surface of the closure, wherein at least a portion of the surfaces which define the combustion volume are coated with a substantially homogenous metallic coating comprising between about 10% and about 40% chromium such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face, and further wherein said coating is exposed to combustion gases.

Claim 3. (withdrawn) A method for fabricating a reduced emissions diesel engine component, wherein said component forms a combustion surface for a diesel engine and wherein a portion of said component which forms a combustion surface has inadequate material to meet design geometry, comprising the steps of

coating at least the portion of said component which forms a combustion surface with a substantially homogenous coating having at least sufficient thickness to allow said surface to meet design geometry, wherein said coating comprises nickel, chromium, and iron; and machining a portion of the coating from the surface to restore desired tolerances.

Restriction Requirement

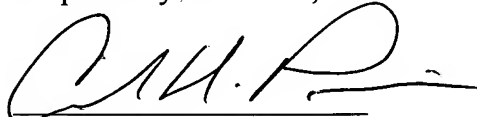
The Examiner has requested restriction of the claims in this application to one of two (2) groups. Group I includes claims 1 and 2 and Group II includes claim 3. Without conceding to the necessity of the restriction requirement, Applicant provisionally elects Group I (claims 1 and 2). Group II (claim 3) is hereby withdrawn without prejudice for reasons unrelated to patentability. Applicant reserves the right to prosecute Group II in a separate divisional application.

CONCLUSION

Applicant respectfully submits that the application is in condition for allowance.

Applicant does not believe any additional fee is required for this Response and Request for Reconsideration, however, in the event any additional fee is required or any overpayment credit is due, the Commissioner is hereby authorized to charge Deposit Account No. 18-0586.

Respectfully submitted,



Carl H. Pierce
Reg. No. 45,730
Reed Smith LLP
2500 One Liberty Place
1650 Market Street
Philadelphia, PA 19103-7301
(215) 241-7970

Dated: April 25, 2005